



Summary Report
2017-2018 Fellowship Year

Prepared by the U.S. Department of Energy, Office of Science
Office of Workforce Development for Teachers and Scientists

Program Overview

The Albert Einstein Distinguished Educator Fellowship (AEF) Program provides a unique opportunity for accomplished K-12 educators in the fields of science, technology, engineering, and mathematics (STEM) to serve in the national education arena. Fellows spend eleven months, beginning in September of each year, working in Federal agencies or in U.S. Congressional offices, bringing their extensive knowledge and classroom experience to education program and/or education policy efforts.

The AEF Program, now in its 28th year with 304 alumni, operates under the Albert Einstein Distinguished Educator Fellowship Act of 1994 (Pub. L 103-382). The legislation states that the Department of Energy (DOE) administers the AEF Program including recruitment, application and selection, and overall management.

The AEF Program is designed to meet the following objectives identified in the legislation: 1) to provide outstanding elementary and secondary STEM education teachers the opportunity to bring to Congress and appropriate branches of the federal government the insights, extensive knowledge, and practical experience of classroom teachers; 2) to increase the understanding, communication, and cooperation between Congress and Federal agencies; and 3) to increase the understanding, communication and cooperation between the federal government and the STEM education community.

The Federal science agencies that host Fellows have as part of their goals to support STEM education to help ensure a future workforce is sufficiently prepared to contribute to the emerging science and technology fields. Fellows are placed in education offices where they provide insights during project conceptualization and assistance with established programs. The Congressional offices that host Fellows, sponsored by DOE, have either a strong STEM portfolio or want to increase their portfolios within their offices.

Overview of the 2017-2018 Participants, Federal Agencies, and Congressional Offices

Fourteen educators were selected for the 2017-2018 Cohort of AEF Fellows:

Number of high school teachers: 8

Number of upper elementary and middle school teachers: 4

Number of states represented by the Fellows: 12

Number of Fellows who have been teaching more than 10 years: 7

The Fellows were selected by the following Agencies and Congressional Offices:

U.S. Department of Energy: 2

National Aeronautics and Space Administration: 2

National Science Foundation: 4

Senator Brian Schatz, HI: 1*

Representative Frank Pallone, NJ: 1*

Representative Phil Roe, TN: 1*

U.S. House Committee on Education and the Workforce: 1*

U.S. House Committee on Science, Space, & Technology Committee: 1*
*DOE sponsored the four Congressional placements.

Program Scope

Fellowship Support

All Fellows receive a monthly stipend of \$7,500, which is paid by the sponsor offices. Additionally, Fellows can request to receive up to \$3,000 for travel and fees associated with their professional development during the Fellowship. All current benefits for are available on the program website: <https://science.osti.gov/wdts/einstein/>.

Application

The on-line application is located on the DOE website at: <https://science.osti.gov/wdts/einstein/>. Interested educators can access the application from mid-August through mid-November.

The application consists of three sections:

- Questions highlighting educational background, professional experience, professional activities, awards and publications;
- Five essay questions; and
- Three letters of recommendation, one being from a school district official.

The responses to the questions on the application are used to assess the eligibility of the application. While most of this information is fact-specific, it provides a way to make both a quick and qualitative evaluation when compared with the responses in the essays.

Application Review and Selection

The application review, selection, and placement process is communicated in detail and posted on the AEF web page: <https://science.osti.gov/wdts/einstein/How-to-Apply/Application-Review-and-Selection-Process/>.

Positions Descriptions

Host offices interviewing selected candidates, the semi-finalists, must have, in advance of the interviews, one-page position descriptions that detail the work load requirements and planned responsibilities within the office. The semi-finalists can then gauge their interests and capabilities in the positions and determine the best fit for their individual needs.

Contributions to the Host Offices

Fellows are regularly recognized for making significant contributions to their host offices. Most of this is managed and guided by position descriptions under the guidance of host office supervisors.

The Fellows in each cohort are usually a collaborative group and are encouraged to share ideas and work together to expand upon tasks and inevitably deliver projects beyond expectation. Position accomplishments are observed by program management during the four required “reports and presentations” due throughout the Fellowship.

Fellows' Professional Development

Fellows are required to establish individual professional development plans designed around high-level goals that combine to advance the knowledge and skills of the Fellows. These plans help the Fellows identify goals and objectives and establish “actions” that will contribute to the achievement of the high-level goals.

The professional development resources available to Fellows from science agencies, STEM policy experts, advocacy organizations, and other STEM education stakeholders may not exist at this level at any other time in their career. The establishment of a plan with milestones will help ensure a valuable experience both within and outside their host offices and into the future.

Outcomes

Fellows complete the AEF Program with a portfolio of opportunities to share with colleagues and students. The portfolios include information on: undergraduate and graduate internships, scholarships, the national research infrastructure supported by the Federal government, how to compete for grants, the latest research on advancing STEM education, and opportunities that inspire students towards STEM careers.

The experiences gained are personally and professionally valuable, and subsequently shared with colleagues. By gaining a clearer understanding of educational issues at the national and local level, Fellows become recognized leaders for the ability to convey substantive information and influence the future of STEM education.

**Albert Einstein Distinguished Educator Fellowship Program
2018-2019 Fellows**

Einstein Fellow Name	Home State Subjects taught Grade(s) level	Sponsor/ Host Office Accomplishments
Ruth Ann Dunn	Vermont All Science Courses High School	Department of Energy Office of Science (sponsor), Senator Brian Schatz, Hawaii (host office)
John Galisky	California Physics Electronics & Robotics High School	Department of Energy Office of Science (sponsor), Representative Frank Pallone, New Jersey 6th District (host office) As a legislative fellow, Galisky wrote legislation authorizing grants for career academies—high school programs that integrate core academics and career and technical education. He advanced legislation supporting living shorelines—natural barriers that reduce erosion and increase coastal resiliency—by writing letters to other member offices, coordinating a staff briefing, and negotiating with senate staff to introduce companion legislation. He monitored new legislation and regulations, advised staff, met with constituents, and assisted with media releases on issues related to education, science & technology, energy & environment, immigration, gun control, labor, and workforce development.
Rebekah Hammack	Oklahoma Engineering Middle School	National Science Foundation (NSF), Directorate for Education and Human Resources (EHR), Division of Research on Learning in Formal and Informal Settings (DRL)

		<p>Hammack served as a K-12 educator representative for the Innovative Technology Experiences for Students and Teachers (ITEST) and Discovery Research PK-12 (DRK12) programs. She conducted portfolio analysis and assisted with the panel review process for both ITEST and DRK12. She also served on the planning committee for the 2018 ITEST PI and Evaluator Summit and was responsible for developing summit sessions in the areas of evaluation of STEM research programs and support for underrepresented groups in STEM.</p>
Kimberly Hermans	<p>California High School Computer Science</p>	<p>National Science Foundation, Computer Information Science and Engineering Directorate (CISE)</p> <p>Hermans contributed to the NSF as a member of the Education and Workforce team in the Computer and Networking Systems division of CISE. She was involved in supporting the CS for All and Broadening Participation in Computing programs. Activities included helping the team plan the Principle Investigators Meeting, overseeing two Research Practice Partnership (RPP) workshops, review analysis of proposals, and contributing to Bits & Bytes and CSEdWeek publications.</p>
Kelly McCarthy	<p>Pennsylvania High School Physics, Environmental Science, Calculus,</p>	<p>National Science Foundation Geosciences Directorate/Office of the Assistant Director</p> <p>Kelly McCarthy supported the logistics of the merit review process for the IUSE:GEOPATHS program in</p>

	Pre-calculus, 8th Grade Science	<p>the Geosciences Education and Diversity Portfolio. She compiled data to draft informational one-pagers on best practices in undergraduate geosciences education to recruit and retain a diverse community.</p> <p>McCarthy also supported the Geosciences Opportunities for Leadership in Diversity (GOLD) program by facilitating logistics and actively participating in a series of reverse site visits to acquire information on project status, novel findings, and inform next steps. She supported the GLOBE program by participating in an advisory review conference for an NGSS-aligned learning modules using GLOBE protocols and supported the 2018 GLOBE Learning Expedition by coaching students at field sites and collecting information about the GLOBE program and its use worldwide.</p>
Michael Romano	Massachusetts High School Science	<p>National Aeronautics and Space Administration (NASA), Office of Education (OE) and the Goddard Space Flight Center</p> <p>Romano served on the Partnerships and Strategy committees at NASA Headquarters, contributing the K-12 educator perspective on agency-wide education initiatives, partnership agreements, and the realignment of the Office of Education as the Office of STEM Engagement. He co-organized the October 2017 NASA event at the White House and supported numerous other DC-area STEM outreach events. At NASA Goddard,</p>

		<p>Romano organized and facilitated a year-long partnership with a Maryland school which included a student engineering challenge with Goddard engineers, educator professional development, a NASA speaker series and an International Space Station downlink. Additionally, Romano collaborated with Hubble Space Telescope personnel at Goddard and education staff at Headquarters to revise career resources for K-12 students, and presented NASA workshops at education conferences including NSTA, NMEA, SEEC at Space Center Houston and SPACE at Kennedy Space Center.</p>
Evan Smith	<p>New York High School Math, Science, Integrated STEM</p>	<p>Department of Energy Office of Science (sponsor), Representative Mark DeSaulnier, California 11th District (host office)</p> <p>Smith developed legislation to recruit talented individuals into teaching careers by instituting a new federal grant program to partner with community service organizations to provide paid, short-term training and teaching experiences to people who might be looking for a first career or a new career. Smith also helped develop legislation to provide advocacy services for students with disabilities. He prepared background information and remarks for events and hearings and was the staff point person on the issues of education, immigration, civil rights, telecommunications, science & technology, and agriculture.</p>

		<p>Department of Energy Office of Science (sponsor & host office)</p> <p>Smith wrote the script for a series of video-quizzes to be used to train match officials for the National Science Bowl.</p>
David Steele	<p>Georgia</p> <p>Middle School</p> <p>Science</p>	<p>National Science Foundation (NSF), Directorate for Education and Human Resources (HER), Division of Human Resource Development.</p> <p>Steele provided a teacher’s perspective in all aspects of the 2017-18 awards cycle to the Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST) program. These efforts included working in close collaboration with alumni, state coordinators, applicants, NSF program officers, national review panelists, and contractors for the program. Additionally, Steele was instrumental in providing guidance on best mentoring and coaching practices for K-12 teachers applying for this award. Finally, Steele also wrote a literature review on effective STEM teaching practices and used this review to revise the questions applicants are required to answer when applying for the PAEMST award. These revised questions are being discussed with NSF leaders to determine if changes will actually be implemented.</p>
Gretel von Bargaen	<p>Washington</p> <p>High School</p> <p>IB Biology</p>	<p>Department of Energy, Office of Science, Office of Workforce Development for Teachers and Scientists</p>

		<p>von Bargaen supported the National Science Bowl during her Fellowship. She compiled a report summarizing methods used by different academic competitions, reviewed questions for the regional competitions and the national finals. von Bargaen also aided in the development of a Science Bowl Snapchat filter and updated the National Science Bowl Facebook page. During the National Science Bowl finals weekend, von Bargaen assisted with the high school Division Team Challenge activities and served as a “timer” during the middle school competition. She also lead an enhancement activity for the middle school students and facilitated a professional development session for team coaches.</p> <p>von Bargaen also completed a thorough review of the K-12 STEM resources available on the WDTS website and added 82 resources to the database, doubling what was present at the start of the review.</p> <p>In addition to performing duties for her office of placement, von Bargaen was able to engage in activities and learning opportunities related to her professional development goals, including attending professionally relevant workshops and conferences and visiting two national labs.</p>
Lisa Winingar	Michigan Middle School Integrated Science	National Aeronautics and Space Administration (NASA), Office of Education (OE) Winingar learned the aeronautics educational portfolio, curating the

		<p>collection of teaching materials and kits to recommend for future products. Winger also collaborated with NASA at large scale public events like the Albuquerque Balloon Fiesta, the Joint Air Base Andrews Air Show, Leesburg Aviation Expo and the Wichita Exploration Place. She presented four conference sessions at the National Science Teachers Association national conference in Atlanta. Winger developed new outreach products about the science of new aeronautics technologies and using an interactive digital platform for the USA Science and Engineering Festival.</p>
Jennifer Wise	<p>South Carolina Mathematics Middle School</p>	<p>Department of Energy Office of Science (sponsor), Representative David P. Roe, M.D., Tennessee 1st District (host office)</p> <p>Wise worked to support several key pieces of legislation including a Free Speech Resolution (H.Res. 307) and the AIM High Act (H.R. 1772). Tasked with increasing co-sponsorship, she was able to assist a 79.2% growth in Free Speech co-sponsorship and a 144.1% growth in AIM High co-sponsorship. In addition to this work, Wise assisted with organizing four district events: school safety, financial aid, youth mental health, and teachers' roundtables. She accompanied Dr. Roe to the final three. Conversations in these forums resulted in collaboration with agencies and Congressional offices, in addition to draft legislation. Within the office, she worked with</p>

		the Education/School Nutrition, Postal, Animals, Science/Technology, Native American, and Humanities portfolios. She also served as the liaison for the Adult Literacy Caucus.
Chris Wright	Maryland Secondary level Math Coach	<p>Department of Energy Office of Science (sponsor), Congressman Bobby Scott, Ranking member of the House Committee on Education and the Workforce (host office)</p> <p>Wright provided oversight and support over 50 states for Every Student Succeeds Act (ESSA) plans, identifying both areas of strength and violations of statute. Wright collaborated with the Council of Chief State School Officers (CCSSO), where he discusses potential areas of success and concern with proposed and approved plans. Wright collaborated with the Department of Education Office of Elementary and Secondary Education to discuss the writing, interpretation, and implementation of the educational law.</p> <p>Wright supported the educational and STEM portfolio by creating talking points for the Congressman on STEM education initiatives.</p>